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CIVILIAN AVAILABILITY MODEL

Jonathan C. Fast Brice M. Stone Kathryn L. Turner

Metrica, Incorporated 8301 Broadway, Suite 215 San Antonio, TX 78209



Larry T. Looper Sheree K. Engquist, Capt, USAF

HUMAN RESOURCES DIRECTORATE MANPOWER AND PERSONNEL RESEARCH DIVISION Brooks Air Force Base, TX 78235-5000

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LARRY T. LOOPER

Project Scientist

WILLIAM E. ALLEY, Technical Director

Manpower and Personnel Research Division

ROGER W. ALFORD, Lt Cor WSAF

Chief, Manpower and Personnel Research Division

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Manpower, Personnel and Training (MPT) experts must participate in the initial stages of a weapon system acquisition process so that estimates of manpower requirements can be derived early enough to be of use to MPT planners. The Civilian Availability Model (CAM) is a planning tool designed to estimate the availability of qualified workers in the work force to fill the manpower requirements generated by new weapon systems. CAM begins with an estimate of the total military available population and provides the ability to assess the ease or difficulty with which the Air Force will fulfill its recruiting goals in terms of quantity and quality. The procedure is a step by step process to eliminate the uninterested, the medically and morally unfit, and the mentally incapable of military service. CAM provides an opportunity to study this process under various economic, demographic, and institutional assumptions.

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PREFACE

This technical paper documents research and development performed in response to Request for Personnel Research (RPR) 85-01. Expansion of Person-Job Match Technology, submitted by the Air Force Recruiting Service (AFRS), Air Training Command (ATC), and the Air Force Military Personnel Center (AFMPC). Work was accomplished under work unit 77192020, Economic Models for Force Management and Costing.

CIVILIAN AVAILABILITY MODEL

SUMMARY

Historically, weapon system design and acquisition as well as allocation and utilization of recruiting resources within the Air Force has been done with limited knowledge about the future availability of civilian personnel to operate and maintain these weapon systems. However, as the Air Force moves toward a more technologically sophisticated force, post development Manpower, Personnel, and Training (MPT) planning is no longer acceptable. MPT must be an integral part of the weapon system acquisition process at an early stage so that the design of the weapon system, training, and supporting personnel management processes can occur in a timely fashion. As well, recruiting and force utilization decision makers must have reliable forecasts of the numbers and kinds of personnel who will be available for future service.

The Civilian Availability Model (CAM) is a planning tool designed to estimate the potential availability of qualified and trainable civilians interested in serving on active duty in the Air CAM is the result of a three-phased research effort. The first phase focused on evaluating various techniques for reliably forecasting the total qualified military available (QMA) population, with the emphasis on predicting the supply of untrained 17- to 23-year-olds over Numerous economic, demographic, labor, and population data sources a 10 year horizon. were examined to generate a general population base which was modified by different forecasting methods and population growth assumptions. The second phase saw the development of a method to forecast the potential interest in joining the military. This method uses a two-stage econometric approach, predicting the number of Air Force recruiters in the first stage and using this number in the second stage to estimate the number of applicants for entry into the Air Results of this process showed that this model was empirically sound and could be used to estimate the propensity of civilians to join the Air Force. The population base and propensity model were incorporated in phase three of this project into a software package which permits the user to vary a number of key economic and demographic factors and estimate the number of qualified and interested civilians, by Armed Services Vocational Aptitude Battery (ASVAB) composites, who might enter active duty for up to ten years in the future.

INTRODUCTION

Weapon system design and acquisition within the Department of Defense (DOD), and in particular in the Air Force, has been done with limited knowledge about the future availability of personnel to operate and maintain these weapon systems. Instead, personnel considerations have been no more than a fallout of human factors research on the design of weapon systems to meet human engineering requirements. In the last ten years Congress has become increasingly concerned that personnel considerations should be extended to include requirements for trained personnel that will be generated when a new weapon system is deployed. Planning to meet manpower requirements did not receive high priority in the past when abundant manpower resources lessened the need for this planning. In essence, manpower could be fitted to hardware after it had been designed and developed.

However, as the Air Force moves toward a more technologically sophisticated force, post-development Manpower, Personnel, and Training (MPT) planning is no longer acceptable. This significant change is governed by five basic facts:

 Weapon systems are increasingly complex, requiring higher levels of operator and maintainer skills;

- · The number of weapons systems is increasing;
- MPT costs to support a weapon system absorb an increasingly larger share of the total life cycle cost of a system;
- Congress has not increased Air Force end strength to allow more flexible planning in the MPT area;
- The overall size of the military-age population is decreasing and is projected to continue to decrease over the next decade.

Thus, MPT experts must now be involved in the weapon system acquisition process at an early stage so that the estimates of manpower requirements can be derived early enough to be of some use to MPT planners. In order for these estimates of requirements to be useful to manpower planners, they must be accurate and defensible.

The Air Force is attempting to develop planning tools which will allow this planning to take place. There are two sides to this manpower issue--supply and demand. Demand is the actual manpower requirement that will be generated by the weapon system and supply is the availability of qualified workers in the military work force to fill this requirement. The purpose of the Civilian Availability Model (CAM) is to provide a planning tool for the supply side of the manpower issue.

General Background

The supply side of the Air Force is handled by Air Force Recruiting Service (AFRS), based on plans and policies developed by the Deputy Chief of Staff for Personnel (AF/DP). The Air Force has recognized for some time that without the pressures of a draft, it would be necessary for the Air Force to compete in the open market against civilian employers for the personnel to satisfy its manpower requirements. Prior to 1990, annual requirements typically called for 60,000 nonprior service (NPS) recruits and 1,500 prior service (PS) enlistments. In 1977, AFRS realized that to fill these requirements it was necessary to develop accurate and comprehensive information about the youth market, both its characteristics and its dynamics. The only data available at that time was a handbook published by the United States Army Recruiting Command (USAREC). The handbook provided estimates of military available (MA) and qualified military available (QMA) populations by county. The data was based on the 1970 census with the qualification rates taken from the Armed Forces Examining and Entrance Stations (AFEES) failure rates for both mental and physical reasons. The handbook and the AFEES were taken over by the Military Enlistment Processing Command (MEPCOM), and the AFEES were redesignated as Military Enlistment Processing Stations (MEPS) in 1979.

Those data were a start towards estimating MA and QMA for The Air Force but they had several deficiencies that made them less than optimal. First, there was no way to organize the data into AFRS recruiting boundaries. Second, the failure rates were based on a sample of draft induced military applicants, not necessarily generalizable to the environment of the all volunteer force. Third, the information was not race or sex specific.

As a result of this, AFRS initiated development of a market analysis capability. Using internal resources, and the resources of the Joint Market Analysis and Research Committee (JMARC), a DOD-wide Recruiting Market Information System (RMIS) was developed. The Defense Manpower Data Center (DMDC) completed the RMIS and continues to update it using data collected from MEPCOM and the MEPS. DMDC has also constructed a file containing the results of the high school Armed Services Vocational Aptitude Battery (ASVAB) testing program, so that failure rates can be calculated using the Air Force enlistment standards.

Research has continued developing better ways to project the supply side of the MPT planning process, including predicting and characterizing accession and retention behavior, as well as better methodologies for forecasting supply.

AFHRL¹ has sponsored several research efforts related to the analysis of civilian availability. One effort (Saving, Stone, and Looper, 1985 and DeVany, Saving, and Shughart, 1984) focused on predicting accession and retention behavior using Air Force historical data with probit and two-stage least squares estimators. This research used AFQT scores and high school graduation as the definition of quality, and focused on predicting up to four years in advance. Another research project co-sponsored by AFHRL was the development of a National Manpower Inventory (NMI) model, which was designed to forecast the supply of qualified civilians, given the demand for skills. In this study (Quester, Goodwyn, Olson, and Perla, 1985 and Silva, 1983), the emphasis was on the prediction of the availability of skilled (or trained) personnel to meet future manpower requirements. Other research efforts conducted by AFHRL have attempted to look at various forecasting tools and their capability when applied to personnel data. One study (Gustafson, Mehra, Ledsham, and Sajan, 1980) looked at applying State Space modeling and Kalman Filtering to the forecasting of personnel accession rates. Another study (Looper and Beswick, 1980) used non-linear regression to attempt to predict the response of accession rates to changes in recruiters and demographics.

Present Study

This technical report presents the results of a three-phase task to develop the framework for a civilian availability model. The research in the first phase focused on techniques for adequately and reliably forecasting QMA, with the emphasis on predicting the supply of untrained (but trainable) 17- to 23-year-olds over a 10- to 15-year horizon. In order to accomplish this forecasting, various sources of civilian QMA data were surveyed and analyzed as to their potential usefulness. As a result of this survey, a database was constructed from the available data. These data were then used to empirically examine potential forecasting techniques in the second phase, to determine the appropriate techniques for QMA projection. The results of this analysis were merged into a systems framework in phase three, to demonstrate a model capable of forecasting QMA, using various definitions of quality.

Section 2 presents the results of the data review and the initial design of the civilian availability model. Section 3 provides the results of an econometric study to estimate a model for predicting the proportion of the military available population which would be interested in military service, in particular, the Air Force. Section 4 presents the mechanics of a computerized prototype of an operationalized version of the civilian availability model. Section 5 contains the summary and recommendations for further research.

DATA SOURCES

CAM requires data with sufficient detail to allow projection of the appropriate population base for military accessions 10 years into the future. Thus, numerous data sources were critically examined to determine the characteristics of the data bases. The data examination used several criteria which included the availability of the data, both historically and in the future, and the reliability of the data. The examination provided layouts, sources, availability to the Air Force, government agency responsible, and potential problems with the data. Various

¹AFHRL has been redesignated Human Resources Directorate, Armstrong Laboratory.

sources for civilian quality data were surveyed. It is clear from Figure 1 that various sources of data are available for use in a civilian availability analysis such as this. The data range from economic to demographic data with recruit and applicant data of several kinds.

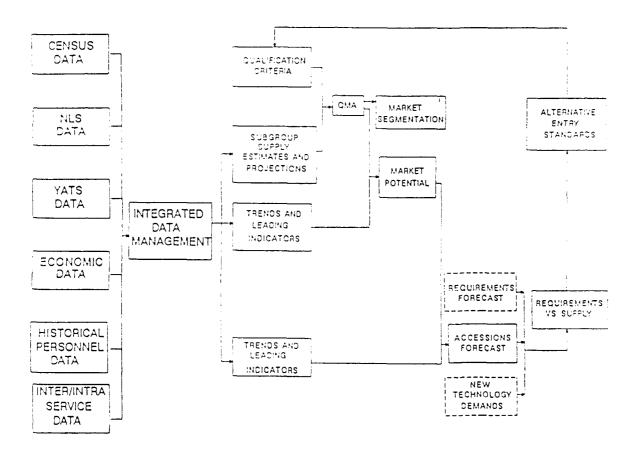


Figure 1. Graphical Representation of the Analysis and Forecasting System.

Economic Data

The first category of data is economic. For purposes of CAM, the Bureau of Labor Statistics creates two data files which are useful for economic analysis, the Labor Force Tape, and the Industry Employment, Hours, and Earnings-National (IEHE) Tape. These two tapes provide numerous data series on population, unemployment, employment, and industry and national wages. The major categories of the data series from the Labor Force Tape are listed in Table 1.

Table 1. Labor Force Tape Files

Civilian Noninstitutionalized Population

Age Race

Sex

Civilian Labor Force

Age

Race

Sex

Occupational Categories

Employment

Age

Sex

Sectors of the Economy

Marital Status

Race

Veterans

Non-veterans

Unemployment

Numbers

Rates

Age

Sex

Sectors of the Economy

Part-time

Full-time

Veterans

Non-veterans

The files of the tape are organized with a series title record followed by the monthly series record. The layout for the title record is shown in Figure A-1 of the Appendix, and the layout for the monthly series record is shown in Figure A-2. The age groupings which were collected by the BLS vary among the four major categories in Table 1. For example, the age groups for the civilian noninstitutional population are 16 to 19 years of age, 20 to 24 years of age, 20+ years of age, 25+ years of age, 25 to 34 years of age, 35 to 44 years of age, 45 to 54, 55 to 64, and 65+. Intersections among some of the series are also provided for the subcategories in Table 1 such as civilian noninstitutional population, white, men, 16 to 19 years of age. Each data series is a monthly time series, with the time period depending on when the series began and if it has been terminated. For example, the total labor force of males 20+ years of age is a monthly series which began in 1948 and is current to date. Another example is the number of civilian labor force farm workers, a data series which began in January 1958 and is also current to date. Each series has an identifying number to facilitate

the finding of the desired data series on the Labor Force Tape, of which there are a total of 887 individual monthly data series.

The IEHE Tape provides employment and earnings time series data for a variety of industrial categories by numerous levels of disaggregation. Table 2 contains a list of the type of series contained in the IEHE Tape. In some cases the industry data series will not contain all of the basic series listed in Table 2. Most series began in either 1958 or 1957, though some are available from 1909. Employment by industry division is available from 1919. For industry divisions (Standard Industrial Classifications (SIC)) and manufacturing groups, about 150 series of seasonally adjusted data are also available. The file contains several thousand series of published and unpublished data.

Table 2. Industrial Employment, Hours, and Earnings - National

Variables	Classifiers			
Earnings, hourly, excluding overtime	Industry			
Earnings, hourly, production workers	Industry by current/constant dollars			
Earnings index, hourly dollars	Industry by current/constant			
Earnings, weekly, spendable	Industry by number of dependents by current/constant dollars			
Earnings, weekly, production workers	Industry by current/constant dollars			
Employment	Industry			
Employment, production workers	industry			
Employment, women workers	Industry			
Hours of work, overtime production workers	Industry			
Hours of work, weekly, production workers	Industry			
Hours of work index	Industry			
Payroll Index	Industry Military Available (MA)			

Demographic Data

The second kind of data is demographic; historical data about various categories of personnel. One source for demographic data is the Defense Manpower Data Center (DMDC), which maintains files that include the high school ASVAB data and data on applicants and accessions to all the services. AFHRL receives and maintains DMDC data from Air Force applicants and accessions. This layout is shown in Figure A-3, in the Appendix. Another source for applicant and accession data is the Processing and Classifying of Enlistees-Procurement Management Information System (PACE-PROMIS) applicant file maintained historically by AFHRL, which contains data on transactions that occur throughout the year. This layout is shown in Figure

A-4, in the Appendix. This data file contains information on individuals who have attempted to enlist in the Air Force and is a potential source for applicant and accession data.

The data collected by the National Opinion Research Center (1982), under the Profile of American Youth project, is also useful to this data analysis framework since it is a source of ASVAB data for students who never intended to enlist in the military. The layout for this file is shown in Figure A-5, in the Appendix.

Population Data

The foundation for the civilian availability model is more than just applicant behavior. Instead an accurate prediction of population is needed which is called Military Available (MA). The foundations for any projections of MA in the years 1995 to 2005 are of course the number of people who will be living in the United States in that time period. This number is the total United States population which must then be modified by various categories of people who are not available for military service (thus the name military available). The estimates used for this purpose (see AF/MPZ Special Study Team, 1985) are projections which come from the Census Bureau. These projections are described in detail in the U.S. Bureau of Census report (1989), Series P-25, number 1018. These projections are based on the 1980 Census, which have been modified to reflect 1986 statistics using population estimates for underestimation by race, sex, and age.

The cohort projections are affected by only two rates for the 1995 to 2005 time period--death rates and immigration rates. In addition new age cohorts are added every year due to births, using an assumed birth rate. The Census Bureau provides these projections of future population using the cohort-component method in which the components of population change (births, deaths, and net immigration) are projected separately for each birth cohort.

The Census Bureau begins with the 1986 base population, which is projected forward as a cohort year by year using projected survival rates and net immigration. The birth rate is factored into the projections by adding a new birth cohort every year applying projected age-race-specific fertility rates to the female population, at the beginning of each year of the projection.

The three agents of change (birth, death, and immigration) are factored into the projections by using three alternate assumptions for each rate-high, middle, and low. The Census Bureau uses the following figures as the assumptions for these rates.

Subject	Low Assumption	Middle Assumption	High Assumption
Births (per 1000 women)	1500	1800	2200
Life Expectancy at birth in 2080 (years)	77.9	81.2	88.0
Yearly net Immigration (thousands)	300	500	800

For example, the middle fertility assumption is that the cohort fertility for any age cohort will be 1800 births per 1000 women. The mortality rates are applied as declining series rates, with the ultimate middle life expectancy of 81 years reached in the year 2080.

Cohort-Component Accounting Framework

The cohort-component methodology is comprised of several steps:

- Step 1. The 1986 population statistics are organized into six matrices with a cell for each year of age, 0 to 100 and over. The six matrices represent the white, black, and other race populations for males and females.
- Step 2. Each age, sex, race cohort is aged forward to July, 1987 using the pertinent survival rate for the cohort.
- Step 3. The appropriate number of immigrants are added to each cohort, using the assumption that all immigrants enter the cohort at the end of the year. The matrices now consist of sex and race population cohorts for ages 1 to 100 and over.
- Step 4. The 1986 female population of each race is identified by single years of age from 14 to 49. This creates a spectrum of the female population of the age-race cohorts exposed to the possibility of childbearing during the one year period.
- Step 5. The appropriate age-race specific fertility rate for that period is then applied to this female population to produce the total number of race specific births for the year.
- Step 6. An assumed race-specific sex ratio is used to divide the births into age-race-sex cohorts.
- Step 7. These age-race-sex cohorts are aged through the first year using the survival rates for these cohorts to form the under age 1 cohort for 1987.

Steps 1 through 7 result in the 1987 population. This process is continued through the year 2080. For a detailed discussion of the methodology used by the Bureau of the Census for the population projections see *Projections of the Population of the United States by Age, Race, and Sex:* 1988 to 2080 (1989).

Population Projections

The cohort-component methodology employed by the Census Bureau produces 30 years of population projections for each of the race, sex, age cohorts (U.S. Bureau of the Census, 1989). An example of one projection is shown in Table 3. It is important to note that this projection is for the total U.S. population including the armed forces, using the middle assumption for all three component rates.

The military available population is derived by the Bureau of the Census from the population figures shown in Table 3. The Census Bureau estimated that the 1980 population had a number that were institutionalized, and therefore not available for military duty. These included persons confined to correctional institutions, mental hospitals, homes for the mentally disabled, and similar institutions. Based on the census data, it was estimated that 1.5% of the male 18- to 24-year-olds and 0.31% of the females were institutionalized in 1980. A portion of this group is also serving in the armed forces. This group must then be further reduced since those serving in the military are not available for non-prior service accession into the military. Another significant reduction will be the number who enlist each year as these cohorts are projected through time. The modeling procedure must reduce the available number by the number projected to enlist each year in the services. The AF/MPZ Special Study Team, 1985,

suggests a reasonable way in which to handle the projected enlistments in accounting for those not available during the projected years due to previous enlistment in the military. Their report showed that the average age distributions for enlistees followed the pattern shown below:

Α	١q	е

	17	18	19	20	21	22	23	24 and over
Rate	.0275	.2361	.2939	.1792	.0965	.0569	.0376	.0251

It was further assumed that the number of accessions per year would be constant at 52,000 females and 408,000 males. This assumed accession figure would be multiplied by the assumed distribution of age to determine the age cohorts to remove from the population of military available for each year.

Table 3. Total Population Including Armed Forces, Ages 18-23, Fiscal Year 1989-2005

AGE							
Year	18	19	20	21	22	23	Total
1989	3791	3884	3775	3630	3679	3785	22,544
1990	3491	3961	3860	3700	3606	3687	22,305
1991	3307	3648	3936	3784	3675	3615	21,965
1992	3230	3457	3626	3856	3757	3683	21,609
1993	3304	3376	3436	3554	3827	3763	21,260
1994	3253	3453	3356	3368	3528	3832	20,790
1995	3400	3399	3432	3290	3345	3534	20,400
1996	3426	3551	3378	3363	3267	3350	20,335
1997	3533	3578	3527	3310	3338	3273	20,559
1998	3657	3689	3555	3455	3286	3344	20,986
1999	3712	3818	3664	3481	3429	3291	21,395
2000	3756	3875	3791	3587	3454	3433	21,896
2001	3772	3921	3848	3712	3559	3459	22,271
2002	3707	3938	3894	3767	3682	3563	22,551
2003	3838	3870	3911	3812	3737	3686	22,854
2004	3819	4006	3843	3828	3781	3740	23,017
2005	3822	3987	3978	3763	3798	3784	23,132

FORECASTING PROPENSITY TO ENLIST

CAM begins with an estimate of MA and provides the ability to assess the ease or difficulty with which the Air Force will fulfill its recruiting goals in terms of quantity and quality. The procedure is a step by step process to eliminate the uninterested, the medically and morally unfit, and the mentally incapable of military service. CAM provides an opportunity to study this step by step process under various economic, demographic, and institutional assumptions.

Applicant Theory

The life cycle model of occupational choice presented by DeVany and Saving (1982) provides a sound theoretical basis for the estimation of a propensity to enlist model. This model predicts the flow of applicants into the MEPS who are interested in military service in the Air Force. The estimated flow of applicants is based upon external economic conditions, as well

as recruiter allocation and mandated force levels. Changes in economic factors such as the civilian employment rate and the ratio of military to civilian compensation would be expected to affect the behavior of the Interested Military Available (IMA) population. Decreases in the employment rate, implying that there are fewer job opportunities available in the private sector, would be expected to increase the number of applicants arriving at the MEPS, whereas increases in the military to civilian compensation would be expected to increase the number of MEPS applicants for the Air Force. The number of Air Force production recruiters also affects the flow of applicants into the MEPS. The more recruiters allocated by the Air Force, the greater the flow of applicants coming into the MEPS.

The number of personnel allocated to production recruiters in any fiscal year is affected by employment conditions, the expected ratio of military to civilian compensation, and the proximity of the force level to the mandated end-of-fiscal-year force level. In response to an increase in civilian employment, the Air Force would be expected to allocate more recruiters because fewer applicants would be expected to arrive at the MEPS. An increase in the ratio of military to civilian compensation, which would increase the flow of applicants into the MEPS, would result in the Air Force decreasing the number of recruiters allocated. Finally, the closer the force level is to the mandated end-of-fiscal-year force level, the fewer applicants that are needed to meet the end-of-fiscal-year requirements, so consequently, the fewer recruiters needed.

This suggests that the number of Air Force recruiters to be allocated is determined by the same conditions which determine the flow of applicants into the MEPS. Attempts to predict the applicant flow using recruiters as an independent explanatory variable, such as employment or the ratio of military to civilian compensation, would lead to biased estimates because such an attempt would be ignoring the endogenous nature of recruiters in the flow of applicants. In order to obtain unbiased estimates, recruiters must be modeled as endogenous to the flow of applicants into the MEPS. This would then include the effects of the independent variables upon the number of recruiters, as well as, the effects of the independent variables and recruiters upon the flow of applicants.

Data

The data used for the estimation of the propensity to enlist model were from the MEPS files and the Historical Airman Data (HAD) base maintained at AFHRL. The data used for the model estimation covered a time period from January 1980 through December 1988. The applicant rate was calculated from the MEPS data based on the earliest recorded transaction for each applicant since multiple transaction records for individuals are common. The relevant civilian population used for determining this rate was the 16- to 19-year-old noninstitutionalized male and female population obtained from the Bureau of Census.

Civilian wages were measured as average weekly earnings of production workers or nonsupervisory personnel on private nonagricultural payrolls. Civilian wage data were converted to monthly wage equivalents, however, no adjustments were made to account for variations in the length of the work week. The military wage variable was calculated from the appropriate military compensation tables, accounting for promotion rates and basic allowances for subsistence and quarters.

A force level variable was measured as the ratio of the actual force level in any given month to the authorized end-of-fiscal-year end strength for Air Force active duty personnel. As a measure of recruiting effort, the number of Air Force production recruiters was included. Finally, binary variables representing the months of the year were included to account for seasonality in the flow of applicants into the MEPS. Table 4 summarizes the variables used in the analysis.

Table 4. Variable Definition

ADM80 -Number of applicants with Administrative composite score of 80 or greater APPLRATE -Ratio of applicants to 16-19 year old population CIVEMP -One minus the civilian unemployment rate ELEC80 -Number of applicants with Electronic composite score of 80 or greater GEN80 -Predicted number of applicants with General composite score of 80 or greater GEN80RATE -Ratio of number of applicants with General composite score of 80 or greater to all others GOALFL -Ratio of monthly force level to end-of-fiscal-year force level MECH80 -Number of applicants with Mechanical composite score of 80 or greater RECR -Air Force production recruiters RELWAGE -Ratio of military to civilian compensation JAN -January binary variable FEB -February binary variable MAR -March binary variable APR -April binary variable MAY -May binary variable JUN -June binary variable JUL -July binary variable AUG -August binary variable SEP -September binary variable OCT -October binary variable DEC -December binary variable QTR1 -First FY quarter binary variable QTR3 -Third FY quarter binary variable

Fourth FY quarter binary variable

QTR4 -

Propensity to Enlist: A Two-Stage Least Squares Approach

The proposed theory states that the propensity to enlist model has one endogenous variable: the number of Air Force production recruiters. To demonstrate the impact of endogeneity, assume a linear form for the propensity to enlist equation:

$$APPLRATE = c_a + b_{ai} RECR + b_{a2} CIVEMP + b_{a3} RELWAGE$$
 (1)

If RECR is endogenous to the flow of applicants (APPLRATE), RECR must be estimated as a dependent variable in the first stage of a two stage estimation procedure. The estimated values for RECR from stage one can then be used in the second stage estimation of equation (1). Thus, the first stage equation for RECR can be specified as:

$$RECR = c_f + b_{r1} CIVEMP + b_{r2} RELWAGE + b_{r3} GOALFL$$
 (2)

The explanatory variable RECR of equation (1) is not independent of the other explanatory variables, and, accordingly, the usual regression techniques will not yield unbiased estimates of the effect of the explanatory variables (Theil, 1971). The two-stage least squares (2SLS) approach will account for the endogeneity of RECR and produce unbiased estimates of the coefficients specified in equation (1).

In stage one of the two-stage least squares estimation, the number of production recruiters has been estimated using the following first stage equation:

RECR =
$$c_r$$
 + b_{r1} CIVEMP + b_{r2} RELWAGE + b_{r3} GOALFL + b_{r4} JAN + b_{r5} FEB + b_{r6} MAR + b_{r7} APR + b_{r8} MAY + b_{r9} JUN + b_{r10} JUL + b_{r11} AUG + b_{r12} SEP + b_{r13} OCT + b_{r14} DEC. (3)

The results of the first stage estimation appear in Table 5. The recruiter equation performed well, as demonstrated by the fact that the equation explains over 71 percent of the variation in the dependent variable. Both the relative military to civilian compensation and the force level goal were significant at greater than the 99 percent level of significance.

The Applicant Supply Equation

Using the estimates from the first stage recruiting equation, the applicant supply equation was estimated.

APPLRATE =
$$c_a$$
 + b_{a1} RECR* + b_{a2} CIVEMP + b_{a3} RELWAGE + b_{a4} JAN + b_{a5}
FEB + b_{a6} MAR + b_{a7} APR + b_{a8} MAY + b_{a9} JUN + b_{a10} JUL + b_{a11} AUG + b_{a12}
SEP + b_{a13} OCT + b_{a14} DEC (4)

where RECR* is the predicted values of the RECR variable from the first stage equation presented in Table 5. The applicant supply equation was estimated using the Cochrane-Orcutt method to correct for autocorrelation in the first stage equation (Theil, 1971). This approach was used because the first stage equation had significant autocorrelation as measured by the Durbin-Watson statistic of 0.2556. The results of the estimation of the supply equation using 2SLS are presented in Table 6.

The supply equation estimated by 2SLS explains over 66 percent of the variation in the dependent variable. The number of recruiters and the employment rate were both significantly different from zero at greater than the 99 percent level of significance. Four of the dummy variables representing the months were significant at greater than the 99 percent level of significance, January, June, July, and August.

Table 5. Air Force Supply **Equation** - First Stage

Constant	7.368
CIVEMP	0.108 (0.23)
RELWAGE	-2.696 (-12.81)*
GOALFL	-2.607 (-3.15)*
JAN	0.088 (1.63)
FEB	0.077 (1.42)
MAR	0.038 (0.71)
APR	0.023 (0.43)
MAY	0.009 (0.17)
JUN	-0.002 (-0.03)
JUL	-0.015 (-0.27)
AUG	-0.022 (-0.41)
SEP	-0.040 (-0.75)
ост	0.010 (0.19)
DEC	-0.011 (-0.21)
R ²	0.711

^() t-statistic.
*Statistically significant at the 99% level.

Table 6. Air Force Applicant
Supply Equation - Second Stage

Variable	2SLS
Constant	-0.194
RECR	1.179 (3.36)*
CIVEMP	-2.824 (-3.51)*
RELWAGE	1.127 (1.04)
JAN	0.203 (2.77)*
FEB	0.079 (1.07)
MAR	0.118 (1.64)
APR	-0.065 (-0.91)
MAY	-0.085 (-1.18)
JUN	0.158 (2.20)*
JUL	0.023 (3.19)*
AUG	0.229 (3.20)*
SEP	0.132 (1.88)
ост	-0.021 (-0.35)
DEC .	0.034 (0.57)
R ²	0.663

^() t-statistic.

^{*}Statistically significant at the 99% level.

Another measure of the performance of an equation is its ability to predict. Three insample measures of predictive credibility were used: root mean square error (RMSE), mean absolute error (MAE), and Theil's Inequality Coefficient (TIC). For an extended discussion of these three measures, refer to Appendix A of Stone, Looper, and McGarrity, 1989. The equation performed well in the forecast as demonstrated by the TIC value of 0.0880, the RMSE of 0.1408, and the MAE of 0.1077.

Predicting IQMA

Once the IMA was determined it was used to predict the number of applicants who are qualified for military service (IQMA). The IMA population was refined so that it included only those who were both medically and morally qualified to perform in the military. The estimated disqualification rates provided below were derived by the AF/MPZ Special Study Team in 1985 and used in this study as default values.

Medical and Moral Disqualification Rates for Men and Women

STANDARD CATEGORY	MEN	WOMEN
Medical only	19.1%	38.2%
Moral Only	4.8%	1.6%
Combined Rate	23.9%	39.8%

Once the IMA was refined to include only those who were medically and morally qualified, it was screened for mentally qualified applicants. The four categories for mentally qualified applicants were: 1) high school graduates, 2) AFQT category I's through Illa's, 3) minimum acceptable General composite score and 4) minimum acceptable total score (sum of Mechanical, Administrative, General, and Electronic (MAGE) composite scores). High school graduates and AFQT category I's through Illa's were stated as a portion of the medically and morally qualified population. Minimum acceptable General composite and total scores were mapped into proportions of the medically and morally qualified population.

The quality of incoming applicants would be expected to be affected by the civilian employment rate. Decreases in the unemployment rate would result in increases in the quality of the applicant flow because higher quality individuals will be more inclined to apply for military service when their civilian employment opportunities are limited. Changes in military relative to civilian compensation will also affect the influx of higher quality recruits. If military compensation decreases relative to civilian compensation, higher quality recruits will be less apt to apply for military service because there are better paying alternatives in the civilian sector. The number of Air Force recruiters also affects the number of higher quality applicants. As the number of recruiters increase, the number of applicants at the recruiting station should also increase. As the number of applicants increase, the proportion of high quality applicants will decrease because the denominator of the proportion (all other applicants) is being affected more by the increase in recruiting effort.

Quality of Applicants: A Simple Approach to Estimating the Quality of the Applicant Flow

Once the flow of recruits was estimated, the next question to be addressed was the quality level of the flow of recruits. To estimate the average quality of the applicant flow, the General composite score on the ASVAB was used as the basis for the definition of average quality. Based on a sensitivity analysis the quality of applicants was measured as the ratio of the number of applicants with a General composite score of 80 or greater to all other applicants. Ordinary least squares was used to estimate the following equation:

GEN80RATE = c_q + b_{q1} CIVEMP + b_{q2} RELWAGE + b_{q3} RECR + b_{q4} GOALFL + b_{q5} QTR1 + b_{q6} QTR3 + b_{q7} QTR4. (5)

The results of the estimation of equation (5) appear in Table 7. The estimation was performed using the Cochrane-Orcutt procedure for dealing with autocorrelation (Theil, 1971). Quality equation (5) performed well, explaining over 56 percent of the variation in the dependent variable. Both the recruiter variable and the force level goal variable were significant at greater than the 99 percent level. QTR4 was significant at the 95 percent level.

Table 7. Air Force Applicant

Quality Equation

Constant	1.095
CIVEMP	-0.144 (-1.36)
RELWAGE	-0.071 (-0.99)
RECR	-0.130 (-5.82)*
GOALFL	-0.461 (-2.72)*
QTR1	-0.008 (-1.40)
QTR3	-0.005 (-0.97)
QTR4	-0.014 (-2.18)**
R ²	0.568
() t-statistic. *Statistically the 99% level.	significant at
**Statistically the 95% level.	significant at

Predicting Quality Distributions

Once the model determined the average quality of the applicant flow based on the General composite score of the ASVAB, distributions of scores for the other three composites of MAGE were predicted. By using the predicted number of applicants with a General composite score of 80 or greater, the number of applicants with scores of 80 or greater in the other three categories were predicted. Using ordinary least squares, the following equations were estimated:

$ADM80 = c_a + b_{al} GEN80$	(6)
ELEC80 = c_e + b_{el} GEN80	(7)
$MECH80 = c_m + b_{ml} GEN80$	(8)

The results of these estimations appear in Table 8. The equations were estimated using the Cochrane-Orchutt procedure to correct for autocorrelation. The three equations performed well with the Mechanical and Administrative equations both explaining over 96 percent of the variation, and the Electronic over 98 percent.

Table 8. Air Force Applicant Quality Distribution Equations

	ADM80	ELEC80	MECH80
Constant	230.867	112.288	285.189
GEN80	1.104	· 0.859	0.993
	(49.89)*	(68.71)*	(44.40)*
R ²	0.963	0.985	0.969

^() t-statistic.

CIVILIAN AVAILABILITY MODEL SOFTWARE

The proceeding sections have discussed the components of the Civilian Availability Model (CAM). In this section, the mechanics of using and operating the software implementation of the model will be discussed. Figure 2 contains a graphical description of the CAM software. The CAM has four modules - data retrieval, model selection, allocation, and reporting. In addition, CAM has a user interface module. CAM is hosted on a system that allows it to function as a single model with several subfunctions. The module names are descriptive of the function to be performed, rather than representative of the way in which the code in such a model is designed. The modules represent submenus within CAM that allow various other functions to be performed.

User Interface Module

The user interface module provides a means for the user to initiate the CAM program. CAM is menu driven, and the user interface module is the main menu, allowing the user access to the other modules of CAM depending on the function which the user wishes to invoke. The user interface module allows the user to enter the data retrieval module, the allocation module, or the reporting module. In addition, the user interface module allows the user to save and retrieve parameters and results of user-defined models.

Data Retrieval Module

Development of the data retrieval module of CAM is beyond the scope of this prototype. Although not operative at this time, such a module would permit the user to retrieve data from the Census population data file as well as from other data files useful in analyzing the

^{*}Statistically significant at the 99% level.

availability of civilians for military service. The user could look at an extract of the NORC file or the PROMIS file. The number and kinds of files that are available are limited only by disk space, but several kinds of data are mentioned in earlier sections of this report and are shown in Figure 2. This would allow the user to view the data used in the actual allocation process. Another possible function for this module would be to provide the user with a means to update the data stored in these files. From this module the user could also specify the data file which would be used in the allocation module for analysis.

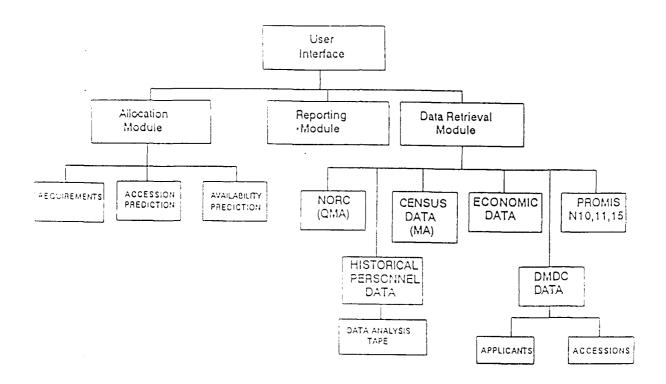


Figure 2. Civilian Availability Model.

Allocation Module

Specification of Constraints

In the allocation module, CAM is used to forecast the IQMA population given the constraints imposed upon the initial population of 17- to 27-year-olds. Initially, this module allows the user to set the constraints under which the model will later forecast IQMA. First, the user is allowed to set the constraints to be imposed upon the Census population data file. By default, the rates used to obtain the population estimates are the moderate rates for birth, death, and immigration as defined by the Census Bureau. The user may then further define the population to be analyzed by restricting certain race, sex, and age specific categories. Race may be restricted to include only whites or blacks, or unrestricted to include whites, blacks, and other races. This population may then be further restricted to include only males or females, or both sexes. And, finally, the user may set the minimum and maximum age cohort to be

considered. Available ages are from 17 to 27 years of age. The default setting includes both sexes and all races, ages 17 to 21.

Next, the user is allowed to set the economic constraints which will be imposed upon the model or accept the defaults. The user may include expected changes in the unemployment rate, the military to civilian wage ratio, and the number of production recruiters. The rate of change can be set by the user for any or all of these variables within a specified minimum/maximum based on the sample means during the January 1980 to December 1988 time period (see Section III).

The final set of constraints which the user may specify affect the availability of the population for military service. The first set of constraints determine the qualification standards for military service. The user may specify the proportion of the population assumed to hold a high school diploma and the proportion who will be classified as an AFQT Category I-IIIa. The user may also set the minimum General composite and total scores which the military will accept for enlistment. The second set of constraints includes the proportion of the population which is institutionalized, the proportion of the population which is medically and/or morally disqualified for military service, and the proportion of the population enrolled in college. In addition, the user is provided with the option to increase or decrease the number of prior service and in-service personnel for the projected years. Tables for prior service and currently in-service populations were established for each of the projected years based on a study by the Army Research Institute (Verdugo and Berliant, 1988). The user can increase or decrease the population with prior service or currently in-service by setting the percentage change expected in these numbers. The default values for these constraints are:

Qualifying Availability Constraints High School Diploma AFQT Cat. I-IIIa Minimum General composite score Minimum total score	86.0% 89.0% 40 150
Minimum total Score	150
Military Availability Constraints:	
Institutionalized Rate	1.3%
Moral Disqualification Rate	3.9%
Medical Disqualification Rate	14.0%
In Service Change	0.0%
Prior Service Change	0.0%
College	48.0%

IQMA Population Calculation

The population input file specified by the user represents the total available population with which CAM will begin the allocation process. From the initial population, the MA population can be calculated. To arrive at the MA population, the portion of the population which is institutionalized is removed. The institutionalized rate specified in the military available constraints is multiplied by the total available population, yielding the total institutionalized population. The residual of the total available population minus the institutionalized population is the total non-institutionalized available population. Next, the portion of the population currently serving in the armed forces or with prior military service is removed, followed by the portion of the population which is enrolled in college. The rate used to determine the proportion enrolled in college is also from the military available constraints specified by the user. This rate is multiplied by the total noninstitutionalized population previously calculated, resulting in the number of currently enrolled college students. To arrive at the total MA population the

institutionalized, in-service, prior service, college enrolled sub-populations are subtracted from the total population.

The second step in the forecast is to compute the total IMA population. The prediction of IMA is made using the equation which estimates the application rate into the MEPS presented in Section III. The applicant rate is estimated as a function of the unemployment rate, the military to civilian wage ratio, number of production recruiters, and the expected force level. The expected values for these constraints, which were specified by the user in the economic constraints section, are used to predict the applicant flow. The product of the applicant rate and the MA population is the IMA population. The uninterested military available population is the residual of the initial MA population minus the IMA population.

Given the estimate of the IMA population, the model then proceeds to determine what proportion of the IMA population is qualified for military service (IQMA). First, the number of medically and morally qualified are determined. The medical and moral disqualification rates were specified by the user in the military available constraints. The specified rates are applied to the population assuming strict proportionality. In other words, one minus the medical disqualification rate is multiplied by one minus the moral disqualification rate, resulting in the proportion of the population medically and morally qualified. The medically and morally qualified rate is multiplied by the IMA population to obtain the portion qualified for military service by these specified rates. The procedure for estimating medically and morally qualified and the assumption of strict proportionality removes all three possible groups of disqualified applicants: those medically disqualified, those morally disqualified, and those both medically and morally disqualified without removing the individual in both categories twice. The portion found to be medically and/or morally disqualified can then be removed from the IMA population.

The medically and morally qualified IMA must then be further refined to include only those mentally qualified for military service. The mental disqualification rates, specified by the user in the qualifying availability constraints, are also applied assuming strict proportionality. The mental disqualification rate is comprised of the proportion of the population which does not have a high school diploma, does not qualify for AFQT Category I-IIIa, and possesses a General composite and total score less than the minimum specified in the constraints by the user. The product of one minus each of these rates is applied to the medically and morally qualified IMA population, resulting in the mentally, medically, and morally qualified portion of the IMA population, the IQMA population.

The last function of CAM allows the user to further refine the IQMA population by specifying the desired MAGE distribution necessary to fulfill the overall career manning needs of the Air Force. Using the equations presented in Section 3 and the estimated IQMA population, the model will predict the number of applicants entering the MEPS with a given General composite score or better. Based on the predicted General composite score, the model will predict the distribution of applicants with minimum or better Mechanical, Administrative, and Electronic composite scores. From the predicted distribution, the restricted IQMA for the future year specified by the user is estimated.

Reporting Module

The reporting module allows the user to specify the way in which the output will be displayed. Graphical output is available as well as printed output. The input to this module are files from either the data retrieval module or the allocation module. This module can be automatically invoked by one of the other modules or it can be user invoked. In the case of the user invoking the reporting module, a menu system allows the user to specify the files to be used and the format of the report for printing.

CONCLUSIONS AND RECOMMENDATIONS

This paper describes the development and testing of a prototype civilian availability model. The research focused on techniques for forecasting potential military available, qualified military available, and interested and qualified military available personnel resources from the civilian population. The emphasis in the model is on predicting the supply of untrained, 17- to 23-year-olds, by ASVAB composites and other demographic factors over a specified time horizon. To accomplish this forecast, various sources of military recruiting service and civilian data were surveyed, analyzed and collected.

This software prototype is the initial step in developing a force management tool for forecasting the available population and then matching it with future weapon system manpower requirements. Future research in this area will incorporate this technology into a comprehensive model to assess the productivity of various force structures based on estimated weapon system manning levels and the availability of the youth population to support these requirements.

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APPENDIX: FILE LAYOUTS

RECORD POSITION	FIELD NAME	NOTES						
1	Record Code	Always coded "T".						
2-17	Series Code	Provides unique identification for each series. This field is subdivided in a specific manner for each file.						
18-111	Title	Alphanumeric title; left justified.						
112-119	Units	Unit of measurement for this series (e.g., hours, dollars).						
120	Periodicity	A code indicating: "M" for monthly data "Q" for quarterly data "A" for annual data						
121-124	Series Began Date	The date the series begins. The form is YYMM for year and month.						
125-128	Series End Date	The date the series ends. The form is YYMM for year and month.						
129-156	Filler	Blanks.						

Figure A-1. Series Title Record Format.

RECORD POSITION	FIELD NAME	NOTES
1	Record Code	Always coded "M".
2-17	Series Code	See description under title records.
18-19	Year	
20-21	Filler	Blanks.
22	Decimal	Indicates where to place the decimal point in the data E.G., a "1" would indicate that one digit lies to the right of the decimal place. The range of this field is 0 to 9.
23-32	Annual Average Data	
23	Sign	A blank indicates positive data, and a "-" indicates negative data.
24-31	Value	
32	Status	(0 = available, l = n.a.)
33-42	January Data	
33	Sign	A blank indicates positive data, and a "-" indicates negative data.
34-41	Value	
42	Status	(0 = available, 1 = n.a.)
43-52	February Data	
43	Sign	A blank indicates positive data, and a "-" indicates negative data.
44-51	Value	
52	Status	(0 = available, 1 = n.a.)
53-62	March Data	
53	Sign	A blank indicates positive data, and a "-" indicates negative data.
54-61	Value	

Figure A-2. Series Data Record Format for Monthly Series.

RECORD POSITION	FIELD NAME	NOTES
62	Status	(0 = available, 1 = n.a.)
63-72	April Data	
63 .	Sign	A blank indicates positive data, and a "-" indicates negative data.
63-71	Value	
72	Status	(0 = available, 1 = n.a.)
73-82	May Data	
73	Sign	A blank indicates positive data, and a "-" indicates negative data.
74-81	Value	
82	Status	(0 = available, l = n.a.)
83-92	June Data	
83	Sign	A blank indicates positive data, and a "-" indicates negative data.
84-91	Value	
92	Status	(0 = available, 1 = n.a.)
93-102	July Data	
93	Sign	A blank indicates positive data, and a "-" indicates negative data.
94-101	Value	
102	Status	(0 = available, 1 = n.a.)
103-112	August Data	

Figure A-2. (cont.)

RECORD POSITION	FIELD NAME	NOTES
103	Sign	A blank indicates positive data, and a "-" indicates negative data.
104-111	Value	
112	Status	(0 = available, 1 = n.a.)
113–122	September Data	
113	Sign	A blank indicates positive data, and a "-" indicates negative data.
114-121	Value	
122	Status	(0 = available, 1 = n.a.)
123-132	October Data	
123	Sign	A blank indicates positive data, and a "-" indicates negative data.
124-131	Value	
132	Status	(0 = available, 1 = n.a.)
133-142	November Data	
133	Sign	A blank indicates positive data, and a "-" indicates negative data.
134-141	Value	
142	Status	(0 = available, 1 = n.a.)
143-152	December Data	
143	Sign	A blank indicates positive data, and a "-" indicates negative data.
144-151	Value	
152	Status	(0 = available, 1 = n.a.)
153~156	Filler	Blank

Figure A-2. (concluded)

MEPS (AFEES) AF APPLICANTS/ACCESSIONS MASTER (JAN 79-PRES)

843/3007

04 - 206,						
TEST - DIFFERENCE AFUT (DAFUT) - APT HISTORY-01ST-04TH (CHARS 178-180, 204-206, 230-232, 256-258) - THESE FIELDS CONTAIN AFUT SCORES WHICH HAVE	BEEN ALTERED WITH A STATISICAL FORMULA. THE PURPOSE OF THESE DAFOT SCORES IS TO COMPARE THEM TO THE ACTUAL AFQT SCORE TO SEE	IF THERE IS A LARGE DISCREPENCY BETWEEN THE TWO. LARGE DISCREPENCIES	INDICATE THAT COACHING BY THE RECRUITER MAY HAVE TAKEN PLACE. THE	FIRST CHAR OF THESE FIELDS IS A SIGN (+ OR -). IF THERE IS NO SIGN	AND THE SCORE IS ' OO' OR ' 99' THEN MANUAL ENTRY WAS DONE AND	THERE IS NO DAFOT FOR THOSE PEOPLE.
NOTE 1						

TEST - 01ST-03RD - SPECIAL - SCORE (CHARS 277-284, 294-301, 311-318) THESE FIELDS CONTAIN THE SCORE, GRADE OR RATING ACHIEVED BY AN INDIVIDUAL ON ANY OF THE FOLLOWING TESTS. CI NOTE

ABBREV 17PE FIELD BREAKDOWN	AFOQT A B POSITION RAW SCORE (4 SCORES - 2 POSITIONS EACH)	RCAT B 2 POSITION RAW SCORE	MDB C 3 POSITION CONVERTED RAW SCORE	DLAB 1 3 FOSTITON STANDARD SCORE	9	SPEAKING 2 POS) (SPEAKING PORTION NOT ADMINISTERED).	DLP12 P 6 PUSITION CONVERTED SCORE (READING 2 POS, LISTENING	DLP13 Q 6	U	ECLT H 3 POSITION CONVERTED SCORE	_	PUBLICATIONS CENTER, BALTIMORE MARYLAND.	ECFA U HELD IN RESERVE AT THE US ARMY ADJUTANT GENERAL	PUBLICATIONS CENTER, BALTIMORE MARYLAND.	FASI K 3 POSITION STANDARD SCORE	OSB M 3 POSITION STANDARD SCORE	AFDAT N 3 POSITION RAW SCORE	c
TEST NAME	ATR FORCE OFFICER OUALIFYING TEST SCORE		ARMY MOTOR VEHICLE DRIVER BATTERY SCORE				DEFENSE LANGUAGE PROFICIENCY TEST TWD SCORE	DEFENSE LANGUAGE PROFICIENCY TEST THREE SCORE	ELECTRONIC DATA PROCESSING TEST SCORE	ENGLISH COMPREHENSION LEVEL TEST SCORE	ENGLISH FLUENCY BATTERY TEST SCORE		EXAMEN CALIFICION DE FUERZAS ARMADAS		FLIGHT APTITUDE SELECTION TEST SCORE	OFFICER'S SELECTION BATTERY SCORE	AIR FORCE DENTAL APTITUDE TEST SCORE	TOOCH TOTAL TOTAL TOTAL TOTAL
RANGE	01-99	00.22	NACANA	012-164	CNKNOWN		UNKNOWN	NAONAN	000 - 128	CNKNOWN	NACKANO		CNKNOWN		NACNANO	UNKNOWN	000 - 198	Tank Or white

PHYSICAL PROFILE MODIFIER (CHARS 339, 341, 343, 345, 347, 349)
IF PHYSICAL PROFILE (CHARS 338, 340, 342, 344, 346, 348) IS
CODED '3' THEN THERE MUST BE SOMETHING IN PHYSICAL PROFILE
MODIFIER TO INDICATE THE PERMANENCE & RESPONSIVENESS TO IREATMENT. m NOTE

PLACE OF BIRTH FIELDS (CHARS 76-100) ARE ONLY REPORTED FOR PEOPLI WHO HAVE A SECURITY INVESTIGATION INITIATED BY MEPCOM. 4 NOTE

PRIDR SERVICE PEOPLE DO NOT HAVE ANY ASVAB DATA REPORTED UNTIL I MAR 89 AND THEN NOT ALL PRIOR SERVICE PEOPLE WILL HAVE ASVABDATA AS PREVIOUS SCORES CAN BE USED FOR ENTRY AND THOSE SCORES ARE NOT PUT INTO THE MEPCOM DATABASE. S NOTE

TEST - ASVAB DATE OF TEST (CHARS 187-192) · THE YEAR/MONTH PORTION OF THIS FIELD (CHARS 187-190) BECAME EFF NOV 84 AND THE DAY PORTION (CHARS 191-192) BECAME EFF JAN 89.

Figure A-3, AFEES Applicants/Accessions Master (Jan. 79-PRES)

a

SIAKIEU BEING	(THE HRL COMPUTED	RANGES EXCEPT														
CHAKS 123-144)	S ARE AS FOLLOWS	19) HAVE THE SAME	FIRST CHARACTER)	RANGES	20-68	26-66	20-61	20-62	20-62	22-72	24-69	29-68	24-70	23-70	20-62	
ARD SCURES	9 AND RANGE	HARS 417-44	G O IN THE	SUBTEST	GS	AR	¥ ¥	PC	ON N	cs	ΑS	¥	ΩC	ΕI	٧Ē	
TEST - ASVAB STAND	REPORTED EFF JAN 89 AND RANGES ARE AS FOLLOWS (THE HRL COMPUTED	STANDARD SCORES (CHARS 417-449) HAVE THE SAME RANGES EXCEPT	THEY HAVE A LEADING O IN THE FIRST CHARACTER)	CHARS	123-124/417-419	125-126/420-422	127 - 128/423 - 425	129-130/426-428	131-132/429-431	133-134/432-434	135-136/435-437	137 - 138/438 - 440	139-140/441-443	141-142/444-446	143-144/447-449	

RANGES FOR TEST AFQT SUM OF SCORES (CHARS 169-171) ARE: (OLD) ASVAB 8-14 (USES RAW) 000-105 (NEW) ASVAB 15-17 (USES STANDARD) 095-258

RANGES FOR TEST - ASVAB SUBTEST SCORES 01-11 FOR ASVABS B & ABDOVE
ARE AS SHOWN IN THE LAYOUT DESCRIPTIONS (CHARS 101-122). RANGES FOR ASVABS 5-7 ARE AS FOLLOWS (ASVABS 5-7 HAVE 01-16 SUBTESTS)
CHARS
SUBTEST
101-102
GENERAL INFORMATION (GI) - 01
00-15
00-15
00-15
00-16
ATTENTION TO DETAIL (AD) - 03
00-30
109-110
ARITHMETIC REASONING (AR) - 05
111-112
SPACE PERCEPTION (SP) - 06
103-104
MATH KNOWLEDGE (MK) - 07
00-20
113-114
MATH KNOWLEDGE (MK) - 07
00-20
119-120
SHOP INFORMATION (KC) - 09
100-20
119-120
SHOP INFORMATION (SI) - 11
00-20
403-404
ARTS INFORMATION (AI) - 13
00-20
403-406
CLASSIFICATION ANTIENTINENESS (CA) - 14
00-27
411-412
CLASSIFICATION COMBAT (CC) - 16

DATE - ENTRY (CHARS 374-379) - THE OLDER DATES FOUND IN THIS FIELD PERTAIN TO PRIOR ENLISTEES AND ARE THE ORIGINAL DATES OF ENLISTMENT ON THE JAN 79-DEC 88 SUBMISSIONS THIS WAS REPORTED FOR APPLICANIS 8 ACCESSIONS. EFF JAN 89 IT IS REPORTED ONLY FOR ACCESSIONS. ٥ NOTE

NOTE 7: LANGUAGE INDICATOR (CHAR 327) - BLANKS INDICATE NO.

NOTE 8. HOME OF RECORD - STATE/COUNTY (CHARS 45-49) - IF THE FIRST 2 CHARACTERS OF THIS FIELD IS GREATER THAN 56, THEN THE VALUE RELATES TO THE FOLLOWING MEANINGS:

AMERICA SOMOA

28

MARSHALL ISLANDS NORTHERN MAREANA ISLANDS PUERTO RICO

VIRGIN ISLANDS

ALSO, IF THE 1ST 2 CHARS ARE ALPHA CHARACTERS FOLLOWED BY '888' THEN THE DESCRIPTION CAN BE FOUND BY LOCATING THE 2 ALPHA CHARS IN THE FIDD CODE OF 'COUNT-ST'.

ACADEMIC EDUCATION LEVEL - HIGHEST (CHAR 75) - WHEN FIRST RECEIVING THIS FIELD IN JAN 89, A FEW OLD CODE VALUES WERE STILL COMING IN. WE BLANK FILLED THESE VALUES WHICH ACCOUNTS FOR THE HIGH NUMBER OF BLANKS. PER DMDC THESE ARE PRIMARILY APPLICANT RECORDS AND OLD CODES WILL PHASE OUT Ġ NOTE

APTITUDE STATUS - APT HISTORY - O1ST-04TH (CHARS 195, 221, 247, AND 273) ON THE SUBMISSIONS DMDC IS PICKING UP THE WRONG DATA FOR THIS FIELD THEREBY EXPLAINING THE HIGH COUNTS FOR VALUE 'P' WHICH MEANS 'PARTIALLY QUALIFIED'. THIS NOTE PERTAINS MAINLY TO THE ACCESSIONS RECORDS. EVENTUALLY, THE CORRECT DATA WILL BE COMING IN FOR THESE FIELDS 0 NOTE

EFF JAN 89 THIS NOTE PERTAINS TO ALL 'HOME OF RECORD' FIELDS (CHARS 42-56). WHEN RECEIVING THIS DATA. THESE FIELDS WERE BEING SKIPPED BY MANY OF THE MEPS STATIONS WHEN ENTERING THE DATA. THIS IS LIKELY TO CONTINUE FOR A WHILE, BUT STEPS ARE BEING TAKEN BY MEPS TO GET THIS DATA ENTERED FOR EVERYONE. NOTE 11:

IEST - ASVAB FORM/VERSION NUMBER (CHARS 172-174) - THE VERSION (CHAR 174) IS EFFECTIVE OCT 84 FOR ACCESSION RECORDS AND MAR 86 FOR APPLICANT RECORDS. THE FORM NUMBER (CHARS 172-173) WAS REPORTED FOR THE COMPLETE TIME PERIOD. FOR THE FILE COVERING THE PERIOD JAN 79-DEC 88 THE FILEDS. CHARS 173-174 CAME FORM, TEST - ASVAB FORM, VERSION NUMBER CHARS 155-156 OF LAYOUT 843/7901F) AND CHAR 172 WAS RECODED FROM TEST - ASVAB FORM NUMBER (CHARS 42-43 OF LAYOUT 843/7901F). ASVAB FORM, VERSIONS O1C & O2C ARE COMPUTER ADAPTIVE TESTS (10T8E) BEING ADMINISTERED BY 6 MILITARY ENTRANCE PROCESSING STATIONS, BEGINNING WITH SAN DIEGO. THEY WILL BE USED FOR 1 1/2 YEARS. THEY WILL BE USED FOR 1 1/2 YEARS. HAVE AFOT SCORES, MAGE SUM OF STANDARD SCORES AND STANDARD SCORES. THESE CAN BE COMPUTED USING THE BA SCORING TABLES EXCEPT FOR WOMEN: THEY NEED AN ADUUSTMENT. SEE JAMES EARLES OR DR VALENTINE, AFHRL/MOA 2 NOTE

MARITAL STATUS/NUMBER OF DEPENDENTS (CHARS 61-62) - THE FIRST CHARACTER OF THIS FIELD (CHAR 61) INDICATES MARITAL STATUS (1=SINGLE, 2=MARRIED) IND THE 2ND CHARACTER (CHAR 62) INDICATES NUMBER OF DEPENDENTS. THE NUMBER OF DEPENDENTS PORTION CAME IN ALL 'O' FOR THE FOLLOWING TIME PERIODS: MAR 79-JUN 81, JUL 82-NOV 86, AND OCT 87-DEC 88 2 NOTE

DUE TO A SCORING PROBLEM AT DMDC THE ASVAB 8 AFQT PERCENTILE SCORES (CHARS 157-168 14 MOTE

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843/9007

175-176) RECEIVED (ACCESSIONS APR 83-DEC 88 AND APPLICANTS MAR 86-DEC 88) WERE IN ERROR & WE HAVE '*' FILLED THE RECORDS FOR THESE TIME PERIODS. ALSO, APPLICANT RECORDS HAVE NO AFOOT SCORE FOR RECORDS FEB 86-OCT 87.

SCORING TEST - AFOT SCORE (CHARS 175-176) - EFFECTIVE I JAN 89 THE SCORIN COMPUTATION FOR THE AFOT CHANGED. ANY TESTS SCORED EARLIER THAN I JAN 89 WILL USE THE OLD COMPUTATION. ON FILES CONTAINING TEST - ASVAB DATE OF TEST', IT CAN BE USED TO DETERMINE WHEN THE AFOT WAS SCORED 5 NOTE

CHARS 11-14 - THIS FIELD WAS CALLED DATE DETERMINATION/IRANSACTION ON THE JAN 79-DEC 88 SUBMISSIONS. 9 NOTE

OCT 89-PRESENT RECORDS IN CHARS 353-354 WITH HEIGHT (CHARS 353-357) - JAN 79-DEC 88 AND HAVE ONLY 2 CHARACTERS REPORTED. THEY ARE CHARS 355-357 ASTERISK FILLED. 17 NOTE

0.157 ALL APTITUDE HISTORY FIELDS CONTAIN DATA RELATING TO THE NUMBER OF TIMES THE ASVAB TEST WAS TAKEN BY AN INDIVIDUAL. APTITUDE HISTORY -CONTAINS THE MOST RECENT DATA FOR AN INDIVIDUAL, FOLLOWED BY APT HIST - O2ND, APT HIST - O3RD, AND THEN APT HIST - O4TH WHICH CONTAINS THE OLDEST DATA. THE ASVAB SCORES IN CHARS 101-168 ARE THE SCORES FOR THE MOST RECENT TEST (01ST). 8 NOTE

WAIVER - CODE (CHAR 382), WAIVER - MORAL - REASON FOR WAIVER (CHAR 383), WAIVER - APPROVAL LEVEL (CHAR 384), ENLISTMENT OPTION (CHAR 396), BONUS OPTION (CHAR 397), YOUTH PROGRAM ATTENDED ON THE JAN 79-DEC 88 RECORDS EVERYONE (APPLICANTS AND ACCESSIONS) HAS A CODE (MOST HAVE YY FOR N/A). ON THE RECORDS BEGINNING IN JAN 89 THOSE THAT HAVE NO NEED FOR A CODE (PRIMARILY PERTAINS TO APPLICANTS) ARE CODED BLANK INSTEAD OF 'Y'. <u>5</u> NOTE

THE FOLLOWING FIELDS WERE NOT FULLY REPORTED OR NOT REPORTED AS SHOWN BELOW: 20: NOTE

NOT FULLY REPORTED JAN 79-DEC 85 NOT FULLY REPORTED JAN 79-JUN 86 NOT FULLY REPORTED OCT 85-SEP 87 AND NOT REPORTED OCT 87-DEC 88 CHARS 61-62 MARITAL STATUS/NUMBER OF DEPENDENTS CHARS 364-365 MEDICAL FAILURE CODE - PRIMARY ETHNIC GROUP

ALL JAN 79-DEC 88 RECORDS THAT HAD FORMS 38 AND ABOVE (EARLIER FORMS AND RECORDS JAN 89 OR LATER ARE • FILLED.) FOR JAN 89 AND LATER RECORDS THE DMDC SCORES CAN BE FOUND IN CHARS 123-168. (FOR JAN 79-DEC 88 THERE ARE NO DMDC SCORES.) ALL SCORES IN THESE FIELDS ARE SCORED USING THE 1980 SCORING TALLES. VALID THE FIELDS IN CHARS 417-486 WERE GENERATED BY HRL/SCA FOR NOTE 21

SCORE RANGES FOR THE STANDARD SCORES (CHARS 471-449) CAN BE FOUND

SCORES (COMPUTED BY HRL.) (CHARS 462-465) TEST - AFQT SUM OF SCORES (COMPUTED BY HRL.) HAS AN ASSUMED DECIMAL (I.E., 0320 = 032.0) 22

TEST - AFQT SUM OF SCORES - NEW (COMPUTED BY HRL) (CHARS 466-468) & TEST - AFQT SCORE NEW (COMPUTED BY HRL) (CHARS 484 NOTE 23

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*YE-026
MEPS AC-025
*LITERAL
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MEPS-013
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CO-815
MEPS-012
*NA-758
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COUN-ST
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*YE-026
RE-400
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ET-300
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62 RACE/FTHNIC (COMPUTED BY DMUC)

63 RACE/FTHNIC (COMPUTED BY DMUC)

64 BARITAL STATUS/NUMBER OF DEPENDENTS (NOTES 13 & 20)

65 BARITAL STATUS/NUMBER OF DEPENDENTS (NOTES 13 & 20)

66 BARITAL STATUS/NUMBER OF DEPENDENTS (NOTES 13 & 20)

67 ACADEMIC EDUCATION LEVEL - HIGHEST - YEARS COMPLETED (EFF JAN 89)

74 ACADEMIC EDUCATION LEVEL - HIGHEST - YEARS COMPLETED (EFF JAN 89)

75 ACADEMIC EDUCATION LEVEL - HIGHEST - YEARS COMPLETED (EFF JAN 89)

76 ACADEMIC EDUCATION LEVEL - HIGHEST - YEARS COMPLETED (EFF JAN 89)

77 ACADEMIC EDUCATION LEVEL - HIGHEST - YEARS COMPLETED (EFF JAN 89)

78 ACADEMIC EDUCATION LEVEL - HIGHEST - SCORE - OT - GENERAL SCIENCE (GS) (NOTE 5)

79 PLACE OF BIRTH - COUNTRY (EFF JAN 89) (NOTE 4)

70 PLACE OF BIRTH - COUNTRY (EFF JAN 89) (NOTE 4)

70 PLACE OF BIRTH - COUNTRY (EFF JAN 89) (NOTE 5)

71 ACADEMIC EDUCATION LEVEL - HIGHEST SCORE - OT - GENERAL SCIENCE (GS) (NOTE 5)

75 ACADEMIC EDUCATION LEVEL - ON - NUMBERICAL OPPERATIONS (NO) (NOTE 5)

76 ACADEMIC EDUCATION LEVEL - OS - NUMBERICAL OPPERATIONS (NO) (NOTE 5)

77 ACADEMIC EDUCATION LEVEL - OS - NUMBERICAL OPPERATIONS (NO) (NOTE 5)

78 ACADEMIC EDUCATION LEVEL - OS - NUMBERICAL OPPERATIONS (NO) (NOTE 5)

79 ACADEMIC EDUCATION LEVEL - OS - NUMBERICAL OPPERATIONS (NO) (NOTE 5)

79 ACADEMIC EDUCATION LEVEL - OS - NUMBERICAL OPPERATIONS (NO) (NOTE 5)

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70 ACADEMIC EDUCATION LEVEL - OS - NUMBERICAL OPPERATION (NOTE 5)

70 ACADEMIC EDUCATION LEVEL - OS - NUMBERICAL OPPE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RECORD - CENSUS REGION (COMPUTED BY DMDC) (NOTE 11)
RECORD - CENSUS DISTRIC! (COMPUTED BY DMDC) (NOTE 11)
RECORD STATE/COUNTY (EFF JAN 89) (NOTES 8 & 11)
RECORD - STATE (NOTE 11)
RECORD - ZIP CODE (NOTE 11)
                                                                   COMPUTE THE SCA SCORES ON THE JAN 79-DLC 88 RECORDS.

TO COMPUTE THE SCA SCORES ON THE JAN 79-DLC 88 RECORDS.

(NOTE: FORM VERSION DID NOT START BEING REPORTED UNTIL OCT 84
FOR ACCESSIONS AND MAR 86 FOR APPLICANTS SO SCA USED JUST
FORM NUMBER FOR THOSE RECORDS. IF A VERSION WAS NEEDED THEY
FIELD AS THE FORM NUMBER SENT BY DMDC IS THE SAME AS THE
FIELD AS THE FORM NUMBER SENT BY DMDC IS THE SAME AS THE
FORM NUMBER USED BY SCA.) FOR FORMS O-7 ADD A LEADING 1 (I.E., 9A = 09A).

THERE MAY BE DIFFERENCES BETWEEN WHAT'S IN THIS FIELD & WHAT'S
IN CHARS 172-174 BECAUSE ON THE SCA FILE IF THERE WERE DUPS
ON SSAN & DATE ACTION WE CHECKED THE FORM AND SUBTEST SCORES.

WE FOUND THAT ALL RECORDS THAT MATCHED ON ALL THOSE FIELDS
WAS MISSING THE VERSION WHICH WAS NEEDED FOR SCORING. WE ARE
PICKING UP SCORES OF THE RECORD WITH THE FORM/VERSION.

(NOTE THAT THESE DUPS WERE I APPLICANT AND I ACCESSION RECORD)
-486) WERE COMPUTED USING THE NEW SCORING TABLE EFFECTIVE JAN (NEW AFQT = 2VE + AR + MK (SUM OF SUBTEST STANDARD SCORES)).
                                                         TEST - ASVAB FORM/VERSION (CHARS 487-488) THESE ARE THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RECORD IDENTIFIER
DATE - ACTION (NOTE 16)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME (EFF JAN 89)
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PAGE	F100	MEPS TE-660 MEPS-007 LITERAL MEPS-003 MEPS-003 MEPS-003 MEPS-026 MEPS-026 MEPS-026 MEPS-026 MEPS-026 MEPS-027 WERS-010 RRA-910
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-		COMPLETED (EFF JAN 79-DEC COMPLETED (COMPUTED BY HE COMPREHENSION (PC) (COMPUTED BY HE COMPUTED
SIONS MASTER (JAN 79-PRES)		1 (10E) RY (NOTE 19) ENDED (NOTE 19) SENTENDED (EFF JAN 89) WELVEL - HIGHEST - YEARS COMPLETED (19) RS ATTENDED (EFF JAN 89) WELVEL - HIGHEST - YEARS COMPLETED (19) RS ATTENDED (EFF JAN 89) RS ATTENDED (RS - 16 (NOTE 5) RS SCORE - 15 (NOTE 5) RS SCORE - 16 (NOTE 5) RAND SCORE - 03 - WURD KNOWLEDGE (WK) RAND SCORE - 04 - PARAGRAPH COMPREHENS RAND SCORE - 05 - NUMERICAL OPERATION RAND SCORE - 06 - CODING SPEED (CS) (COMPANS RAND SCORE - 09 - MECH COMPREHENSION (AND SCORE - 10 - ELECTRONIC INFORMAT RAND SCORE - 10 - ELECTRONIC INFORMAT RAND SCORE - 11 - COMBINATION OF WK B SCORE - 11 - COMBINATION OF WK B SCORE (COMPUTED BY HRL) (NOTE 21) TIVE SUM OF STANDARD SCORE (O95-258) (COMPUTED BY HRL) SCORE (COMPUTED BY HRL) (NOTE 21) SCORE (COMPUTED BY HRL) (NOTE 21) TIVE SCORE (COMPUTED BY HRL) (NOTE 21)
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S		F ENLISTMENT (10E) PAY - ENTRY M ENLISTED FOR MENT OPTION (NOTE 19) PROGRAM ATTENDED (NOTE PROGRAM YEARS ATTENDED IC SOURCATION LEVEL - H ASVAB SUBTEST SCORE - A ASVAB STANDARD SCORE - A ASVAB STANDARD SCORE A ASVAB STANDARD SC
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4.

X FACTOR (CHAR 266) IS USED TO DETERMINE AN INDIVIDUAL'S ABILITY TO LIFT HEAVY WEIGHTS ABOVE HIS/HER HEAD. THIS DATA IS USED TO SELECT IND.VIDUALS FOR AFSC'S IN WHICH THIS TYPE OF LIFTING IS REQUIRED (I.E., FLIGHT LINE AFSC'S).

842/8703F

GENERATES AN RB (HOLD RECORD). THE DISPOSITION NARRATIVE IS CLEAR TEXT ABOUT THE APPLICANT. IT IS INTENDED TO EXPLAIN THE DISPOSITION CODE OR IDENTIFY THE SUSPENSE AREA. IF LETT BLANK, THE MPC SYSTEM WILL GENERATE THE APPROPRIATE NARRATIVE BASED ON THE DISPOSITION CODE Ċ

THERE ARE 7 TESTS (CHARS 430-469 AND 1283-1298) THAT ARE REQUIRED FOR SOME CAREER FIELDS: .. ო

AAI) (SAME AS ROA) AS (RCAT) (SAME (AFDAT) (DLAB) (EDPT) (ROA) (AP) DEFENSE LANGUAGE APTITUDE BATTERY ELECTRONIC DATA PROCESSING TEST RADIO COMMUNICATIONS APTITUDE TEST AF HENTAL APTITUDE TEST AUDITORY PERCEPTION RADIO OPERATOR ANALYSIS ANALYSIS APTITUDE TEST

MINIMUM QUALIFYING UNKNOWN 057/071 SCORE 000-022 961 - 000 012 - 164000 - 128UNKNOWN RANGE AFSC FOR WHICH REQUIRED 49131/49132 UNKNOKN 98230 20230 20830 AAT/RCAT ROA/AP AFDAT OLAB **EDPT**

THRU DEC 87 WAS EFFECTIVE ROA NOTE

15 TEST - ASVAB SUBTEST SCORES - 01-10 (CHARS 390-409): THIS DATA NOT BEING REPORTED YET, AND MPC IS NOT SURE WHEN IT WILL BECOME AVAILABLE 4

OPTIMAL INDICATORS (CHARS 594-596 & 852-899); THE VALID RANGE IS 000-100: 100 IS THE BEST, AND 000 IS THE WORST. ß

PREFERENCE FIELDS - M.A.G.E (CHARS 507-510). THE RANGE FUR THESE FIELDS IS 0-9, WHERE O IS THE AREA LEAST PREFERRED, AND 9 IS THE AREA MOST PREFERRED. NO DIGIT SHOULD BE DUPITICATED IN ANY RECOND WHEN LOOKING AT THESE FOUR FIELDS TOGETHER (E.G., 0000, 9999, 1226, 3397, ETC. ARE ALL INVALID). 9 NO TE

RECORD IDENTIFIER (CHARS 1-3) 7 NOTE SCN) (OPPORTUNITY WILL BE NO1 - PJM ENIER OPPORTUNITY (OPPORTUNITY WILL BE NO2 - EXIT PJM WITHOUT RESERVATION OF OPPORTUNITY NO3 - EXIT PJM WITH RESERVATION OF OPPORTUNITY N02

EFF 23 MAY 88 THE PROMIS PROGRAM HAS BEEN WORKING PROPERLY.

- SAME AS NO3, BUT WITH VOICE INFORMATION

0 2 0

(EFF 22)

87-PRES) (Jan. A-4. PACE-PROMIS-Personnel Figure

- 842/8703F: PACE PROMIS-PERSONNEL MASTER (JAN 87-PRES) (OLD# 415/8703F)
- GENERATE AN NOS UR NOS RECORD FOR NEARLY EVERY NOTHE FILE. IN MOST CASES, NOTS WILL EQUAL (NO2S + NO3S) RECORD ON THE FILE. NOW ABLE TO
- VOCATIONAL INTEREST FOR CAREER ENHANCEMENT (VOICE) (CHARS 512-523): THIS DATA IS NOT BEING REPORTED, AND MPC IS NOT SURE WHEN IT AILL BECOME AVAILABLE 80 NOTE
- PUM NUMBER TO DATE/NUMBER TODAY (CHARS 624-627): FROM JAN 87 THRU APPROXIMATELY NOV 87 THE UPDATE FOR THIS FILE WAS RUN AT LEAST DAILY. FOR UNKNOWN REASONS, 17 SEEMED TO ACCUMULATE NUMBER OF PUMS TODAY WHILE WIPING OUT NUMBER OF PUMS TO DATE. . . 6

NOTE

- PUM 01-16 AVAILABILITY NUMBER (CHAKS 900-963): THIS REPRESENTS THE NUMBER OF JOBS AVAILABLE, SYSTEM WIDE, FOR A SPECIFIC AFSC AT THE TIME AN OPPORTUNITY IS RUN. AN ADMINISTRATIVE AFSC, FOR EXAMPLE, WOULD MOST LIKELY HAVE A HIGH NUMBER OF JOBS AVAILABLE. WHILE AN EDPT AFSC MIGHT HAVE A RELATIVELY LOW NUMBER OF JOBS <u>0</u> NOTE
- HEIGHT (CHARS 251-254) WAS REPORTED AS 4 CHARS JAN 87-7 FEB 88 AND AS 2 CHARS FOLLOWED BY 2 BLANKS 8 FEB 88-PRESENT. =
- WEIGHT (CHARS 255-259) WAS REPORTED AS 5 CHARS JAN 87-7 FEB 88 AND AS 3 CHARS FOLLOWED BY 2 BLANKS 8 FEB 88-PRESENT. 2 NOTE
- FROM 1 JAN 87-7 FEB 88 TWO SSAN FIELDS (CHARS 16-24 AND 131-139) WERE REPORTED CONTAINING IDENTICAL INFORMATION. EFFECTIVE 8 FEB 88 ONLY ONE SSAN FIELD (CHARS 16-24) IS REPORTED. .. E NOTE
 - DATE CHANGE COMMON JOB (CHARS 476-481): EFF 8 FEB 88 THRU
 PRESENT A REPAIR TO THE PROMIS PROGRAM NOW UPDATES THIS FIELD
 PROPERLY. THE RECORDS WE RECEIVE ARE THOSE THAT ARE BEING UPDATED
 IN ONE WAY OR ANOTHER. EACH UPDATE IS CALLED A TRANSACTION, AND A
 RECORD THAT IS HAVING JOB DATA UPDATED WILL HAVE THIS DATE FIELD
 UPDATED. NEARLY ALL TRANSACTIONS WILL BE UPDATING JOB DATA, THERE-4 NOTE
- TEST AFQT SCORE COMMON TEST (CHARS 418-419): EFFECTIVE I JAN 89 THE SCORING COMPUTATION FOR THE AFQT CHANGED. ANY TESTS SCORED EARLIER THAN 1 JAN 89 WILL USE THE OLD COMPUTATION ON FILES CONTAINING 'TEST ASVAB DATE OF TEST', IT CAN BE USED DETERMINE WHEN THE AFOT WAS SCORED. .. 5 NOTE
- DUE TO A PROCESSING ERROR, 9005 WAS USED FOR DATE - SUBM: DUE TO A BOTH MAY 90 AND JUN 90 9 NOTE
- ASVAB FORM/VERSION NUMBER COMMON TEST (CHARS 1274-1276).
 ASVAB FORM/VERSIONS O1C & O2C ARE COMPUTER ADAPTIVE TESTS (10T8E).
 BEING ADMINISTERED BY 6 MILITARY ENTRANCE PROCESSING STATIONS.
 BEGINNING WITH SAN DIEGO. THEY WILL BE USED FOR 1 1/2 YEARS.
 THESE CAN BE COMPUTED USING THE BA SCORING TABLES EXCEPT FOR WOMEN. THEY NEED AN ADJUSTMENT. SEE JAMES EARLES OR OR. VALENTINE NOTE 17

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AFSC-AMN-DC
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Figure A-5. Data Base for the Profile of American Youth Study

DATA BASE FOR THE PROFILE OF AMERICAN YOUTH STUDY

DESCRIPTION

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LAYOUT: FLD#